The Second Great Contraction

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Abstract

The global scope and depth of the 2007-2009 crisis is unprecedented in the post World War II period. As such, the most relevant comparison benchmark is the Great Depression, or the Great Contraction as dubbed by Friedman and Schwartz (1963). We highlight some of the similarities between these two episodes and extend our analysis of the aftermath of severe financial crises to include the most severe post-WWII crises as well. As to the causes of these great crises, we focus on those factors that are common across time and geography; we discriminate between root causes of the crisis, its symptoms, and features such as financial regulation which serve as amplifiers of the boom-bust cycle.

JEL F3, H6, N10

[1] This paper was prepared for the conference "Financial Globalization: Culprit, Survivor or Casualty of the Great Crisis?", Yale University, November 12-13, 2009. The material is drawn from Carmen M. Reinhart and Kenneth S. Rogoff *This Time is Different: Eight Centuries of Financial Folly* (Princeton: Princeton University Press, 2009). I wish to thank Vincent R. Reinhart for helpful comments and suggestions.

"Overindebtedness simply means that debts are out-of-line, are too big relative to other economic factors. It may be started by many causes, of which the most common appears to be new opportunities to invest at a big prospective profit… such as through new industries… Easy money is the great cause of over-borrowing."

Irving Fisher (1933).

I. Introduction

The issues I address fall into three broad areas.[2] The next section takes stock of the collateral damage that followed the financial turmoil that began as the subprime crisis in the United States in the summer of 2007. In particular, it considers the incidence of banking crises and currency and crashes around the world. Apart from its impact on domestic and international financial flows and the changes in the landscape of the financial industry that this crisis has produced, the toll on the real economy has been great. The evolution of world trade helps to illustrate the breadth and depth of the economic downturn. Global equity prices have similarly ridden a roller coaster. The evidence presented here places these developments in a broader historical and international perspective that allows us to gauge the unusual severity of the unfolding global crisis.

Section III dwells on the aftermath of severe financial crises and speculates on our current position in the post-crisis cycle. The comparisons focus primarily on the housing and labor markets, where the aftereffects of the crises have tended to linger the longest. The fiscal implications and consequences of severe crises are discussed. Section IV poses the questions of what caused these great crises and what factors make them more severe. This discussion emphasizes causal factors that are common to severe financial crises

[2] This note follows my remarks at the conference "Financial Globalization: Culprit, Survivor or Casualty of the Great Crisis?" Yale University, November 12-13, 2009 and draws heavily from Reinhart and Rogoff (2009), which will henceforth be referred to as RR. The references cited throughout provide further elaboration of the main points made in this note.

across countries and across time rather than those that are idiosyncratic to the political and economic circumstances. The last section concludes with words of caution on the dangers of complacency about the emerging view that the storm has passed. There is some discussion regarding concerns about the high (and rapidly rising) levels of public sector indebtedness.

II. Taking stock: The global dimensions of the crisis

1. A global crisis index

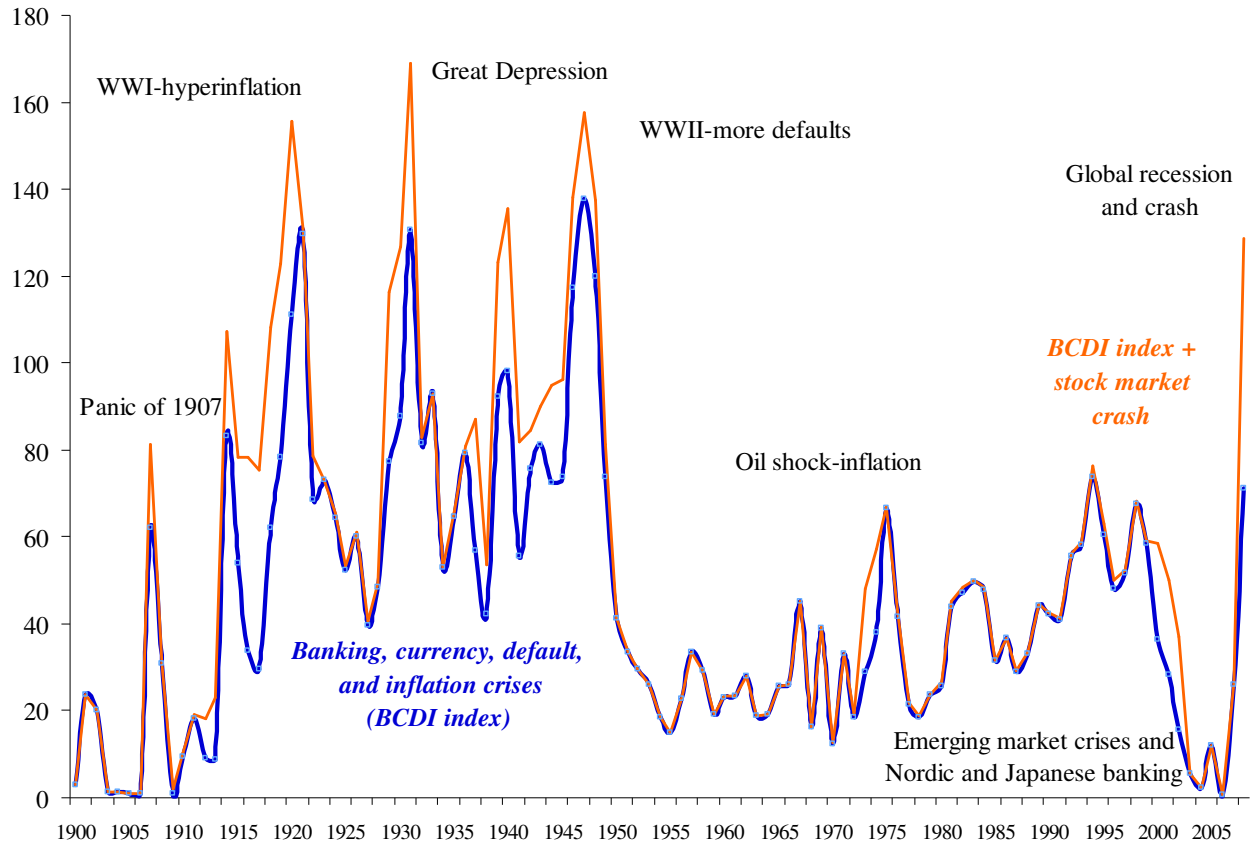
Where are we in a historical global context? We present an index that proxies world economic turbulence. These aggregate crisis indices are the time series shown for 1900-2008 in Figure 1 for the "World". The indices are weighted by a country's share in world GDP, as we have done for debt and banking crises. The 66-country sample accounts for about 90 percent of world GDP. The country indices (without stock market crashes) are compiled from the time of independence (if after 1800) onward; the index that includes the equity market crashes is calculated based on data availability. While inflation and banking crises predate independence in many cases, a sovereign debt crisis (external or internal) is by definition not possible for a colony. In addition, numerous colonies did not always have their own currencies. The *BCDI index* stands for banking (systemic episodes only), currency, debt (domestic and external), and inflation crisis index. When stock market crashes are added (shown separately) to the *BCDI* composite, we refer to it as the *BCDI* +

Figure 1 chronicles the incidence and, to some degree, the severity of the varied crisis experience. A cursory inspection of the figure reveals a very different pattern

before and after World War II. The pre-war experience is characterized by frequent and severe crises episodes ranging from the banking-crisis driven "global" panic of 1907 to the debt and inflation crises associated with World War I and its aftermath. The only period after World War II that we see as high an incidence of crises is the fifties, when the losing combatants—Germany, Austria, Japan, Italy—were in a state of default. Plus, of course, there were many countries that had gone into default in the thirties that were still in default. But since the immediate aftermath of World War II, we had not seen a crisis this global in scope.

The sharp rise in the blue line (*BCDI index)* in 2007 and more so in 2008 is mostly dominated by banking crises and also currency crashes. Indeed, a large share of countries in the fall of 2008 had sufficiently large depreciations to classify as a currency crash (i.e., exchange rate depreciations exceeding 15 percent). The red line adds stock market crashes—which were ubiquitous in 2008.

Figure 1 Varieties of crises: World aggregate, 1900-2008
A composite index of banking, currency, sovereign default and, inflation crises, and stock market crashes (weighted by their share of world income)



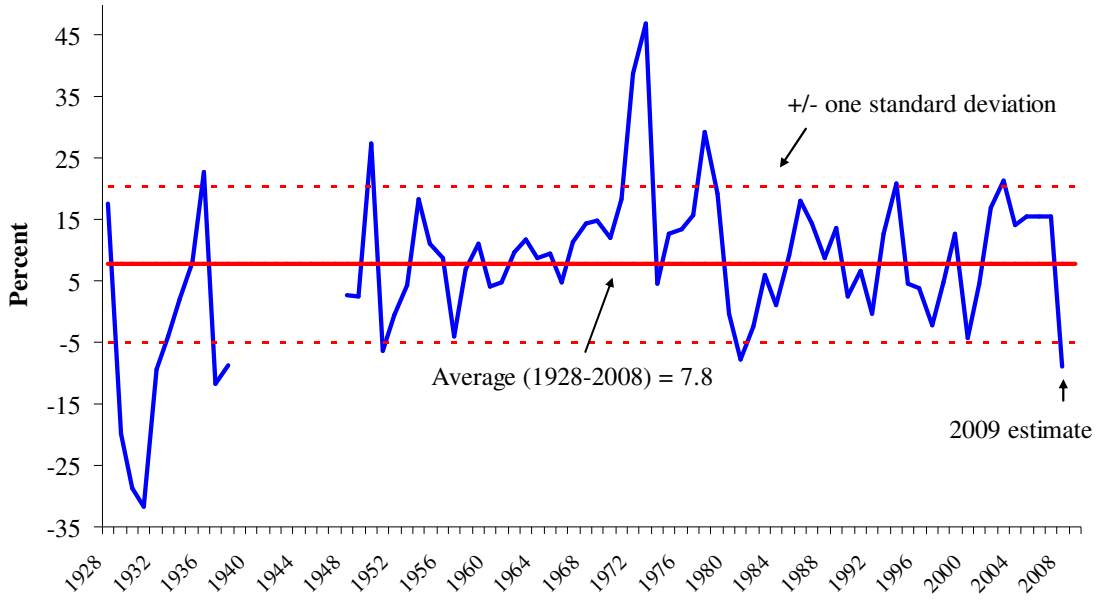
Notes: The banking, currency, default (domestic and external) and inflation composite (*BCDI* index) can take a value between 0 and 5 (for any country in any given year) depending on the varieties of crises taking place on a particular year. For instance, in 1998 the index took on a value of 5 for Russia, as there was a currency crash, a banking and inflation crisis, and a sovereign default on both domestic and foreign debt obligations. This index is then weighted by the country's share in world income. This index is calculated annually for the 66 countries in the sample for 1800-2008 (shown above for 1900-onwards). In addition, we use the Barro and Ursua (2009) definition of a stock market crash for the 25 countries in their sample (a subset of the 66-country sample-except for Switzerland) for the period 1864-2006; we update their crash definition through December 2008, to compile our *BCDI+* index. For the United States, for example, the index posts a reading of 2 (banking crisis and stock market crash) in 2008; for Australia and Mexico it also posts a reading of 2 (currency and stock market crash).

2. World trade

As to trade, we offer an illustration of the evolution of trade during two global crises. Figure 2 plots the value of World merchandise exports for 1928-2009. The estimate for 2009 uses the actual year-end level for 2008 as the average for 2009; this yields a 9 percent year-over-year decline in 2009, the largest one-year drop since 1938. [3] Other large post-WWII declines are in 1952, during the Korean War, and in 1982-1983, when recession hit the United States and a 1930s-scale debt crisis swept through the emerging world. Smaller declines occurred in 1958, the bottom of a recession in the United States, 1998 during the Asian financial crisis, and in 2001, after September 11.

[3] While we have reliable trade data for a most countries during World War II, there are sufficient missing entries so as to make the calculation of the world aggregate not comparable to other years during 1940-1947.

Figure 2. World export growth, 1928-2009
(annual percent change)

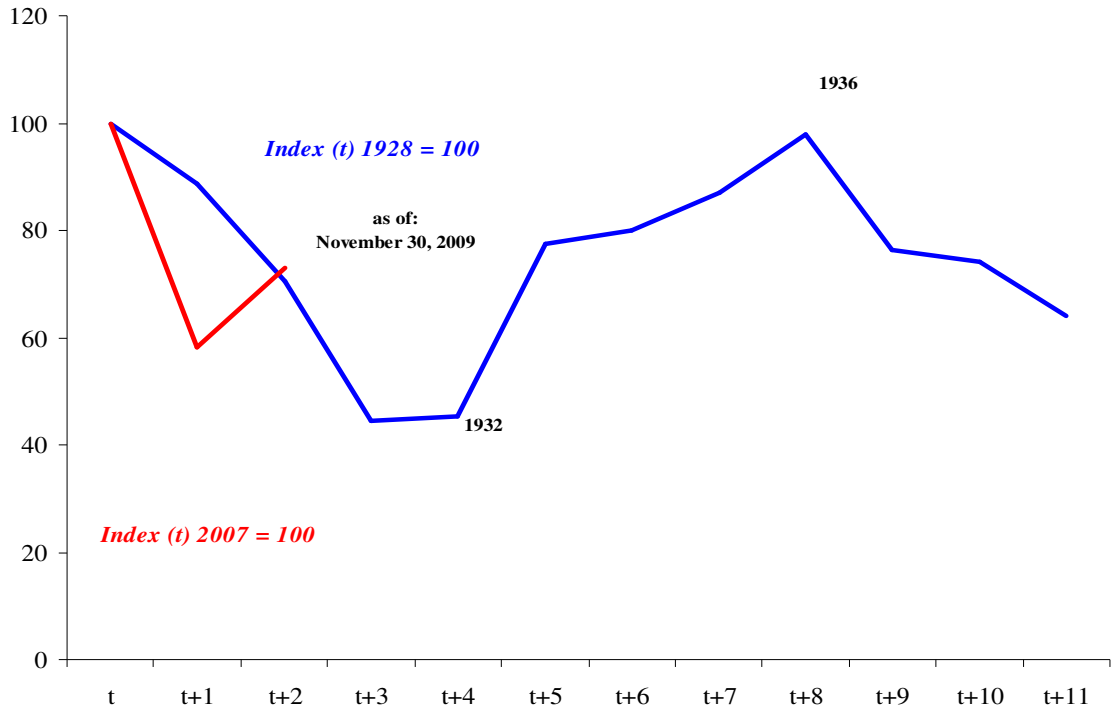


Sources: Global Financial Data (GFD), League of Nations, *World Economic Survey* (various issues), International Monetary Fund, *World Economic Outlook,* and the authors (see notes).
Notes: The estimate for 2009 uses the actual year-end level for 2008 as the average for 2009; this yields a 9 percent year-over-year decline in 2009, the largest post-war drop. Other large post-WWII declines are in 1952, during the Korean War and in 1982-1983, when recession hit the United States and a 1930s-scale debt crisis swept through the emerging world. Smaller declines occurred in 1958, the bottom of a recession in the United States, 1998 during the Asian financial crisis and in 2001, after September 11.

3. Global equity prices

Figure 3 plots the *Financial Times* 1200 Global Stock Market Index deflated by consumer prices; real stock prices. The blue line shows the path of prices during the Great Depression. It sets 1928 equal to 100. The red line is the current FTSE 1200, and that sets 2007 equal to 100. Figure 3 highlights that the recovery during 2009, notwithstanding, still left real equity prices (following the collapse during 2008) at comparable levels to those recorded during the Depression.

Figure 3. Global stock markets during global crises: Composite real stock price index *(end-of- period)*



Sources: Global Financial Data (GFD), Standard and Poor's, International Monetary Fund, *World Economic Outlook,* and the authors (details provided in the data appendix).

Notes: World composite stock price index from GFD for 1928-1939 and from S & P for 2007-2009. The Global 1200 index covers seven distinct regions and 29 countries, and captures approximately 70% of the world market capitalization. Stock prices are deflated by world consumer prices. For 1928-1939 these are constructed using median inflation rates for the 66-country sample; for 2007-2009 these are taken from the *World Economic Outlook,* end-of-period prices. The years 1928 and 2007 marked the cycle peak in these indices.

4. The "big picture"

In sum, Figures 1 to 3 highlight the breadth, depth, and internationally synchronous nature of the post-2007 financial crisis, especially in relation to the milder, more scattered crises episodes of the post war landscape. Even "significant global" events, such as the break-down of the Bretton Woods system of fixed exchange rates, the oil shocks of the mid-1970s, and the emerging market debt crisis of the early 1980s, pale in comparison in terms of the incidence of crises and impacts on the real economy.

Indeed, the ouput declines registered in many advanced and emerging market economies in 2009 rank among the largest declines in the history of their national income accounts. In several countries, the declines in real GDP during the second great contraction (2008-2009) matched and even exceeded those recorded during severe "home grown" financial crises. This list includes such diverse countries (the prior crisis year in parentheses) as Finland (1991); Mexico (1995); Singapore (1982); Spain (1977); Sweden (1991); Turkey (2001), among others.

Having suggested that the severity of this crisis is on a different scale from the post-war norm, the logical sequel is to expect that the aftermath of the crisis will, in all likelihood, also depart from the "standard" post-war recession-recovery pattern. To this end, the next section summarizes selected empirical findings of the RR study on the aftermath of severe financial crises.

II. The Aftermath of Financial Crises

As to the current conjuncture in the United States, the post-war recession experience should not be seen as an instructive benchmark for where we are at present or what we should expect. The average NBER post-war recession lasts less than a year. The worst one lasted 16 months. We passed those milestones.

Broadly speaking, financial crises are protracted affairs. More often than not, the aftermath of severe financial crises share three characteristics. ***First,*** asset market collapses are deep and prolonged. Real housing price declines average 35 percent stretched out over six years. ***Second*****,** the aftermath of banking crises is associated with profound declines in output and employment. The unemployment rate rises an average of

7 percentage points over the down phase of the cycle, which lasts on average over four years. ***Third,*** the real value of government debt tends to explode, rising an average of 86 percent in the major post–World War II episodes. Interestingly, the main cause of debt explosions is not the widely cited costs of bailing out and recapitalizing the banking system. In fact, the biggest driver of debt increases is the collapse in tax revenues that governments suffer in the wake of deep and prolonged output contractions.

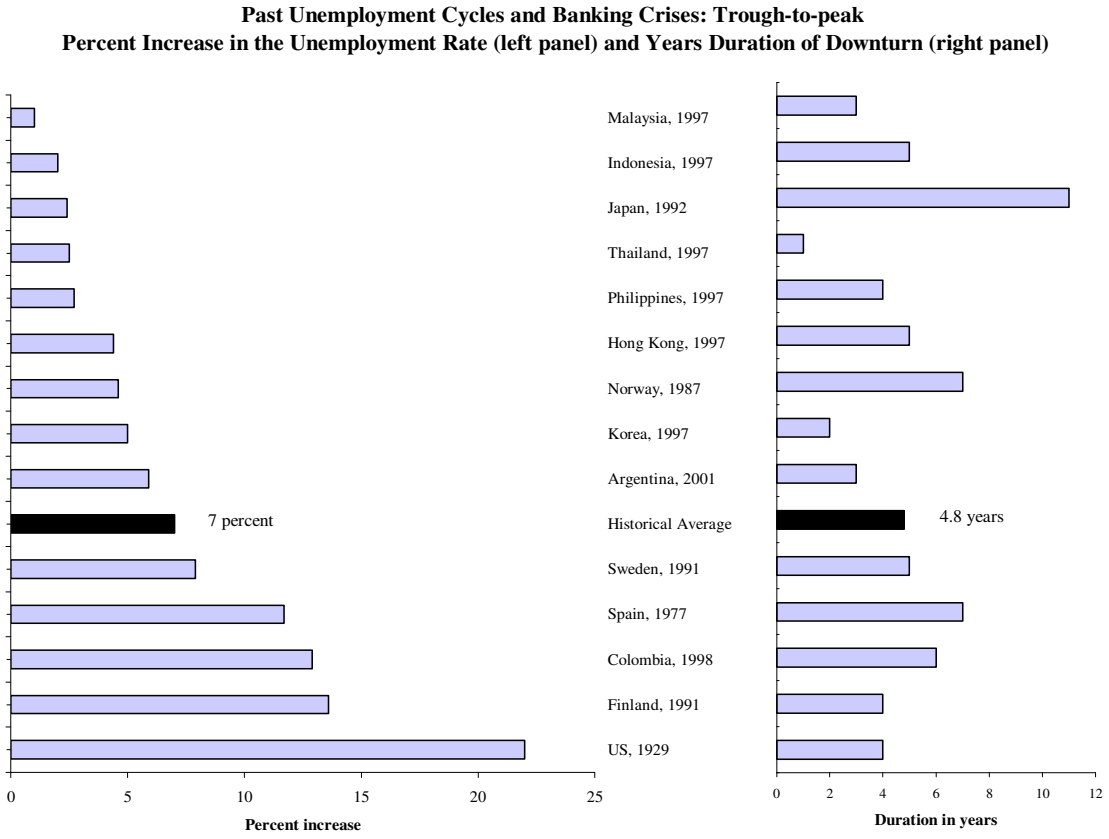
1. Unemployment

To illustrate, Figure 4 examines unemployment rates in the wake of the 14 worst financial crises in the post-war period. The left panel shows the increase in the unemployment rate from the low point to the high point. That is, it is the cumulative increase in unemployment for that particular crisis. What the right panel shows is the duration in years of the time it takes to go from the lowest unemployment level to the highest. On average from bottom to top, unemployment increases by about 7 percentage points during the worst financial crises. In the U.S. context, low point in unemployment in 2006 was around 4 percent—a 7 percentage point increase would take it to 11 percent. The average duration (bottom to peak) is 4.8 years.

These indices are the official unemployment rates; we are now all aware of more encompassing measures, such as the Bureau of labor Statistics' U6 that are much higher than this after taking into account underemployment and discouraged workers.

To reiterate, recovery in the aftermath of severe financial crises are protracted affairs, in general.

Figure 4



Sources: OECD, IMF, Historical Statistics of the United States (HSOUS), various country sources, and authors' calculations.
Notes: Each banking crisis episode is identified by country and the beginning year of the crisis. Only major (systemic) banking crises episodes are included, subject to data limitations. The historical average reported does not include ongoing crises episodes.

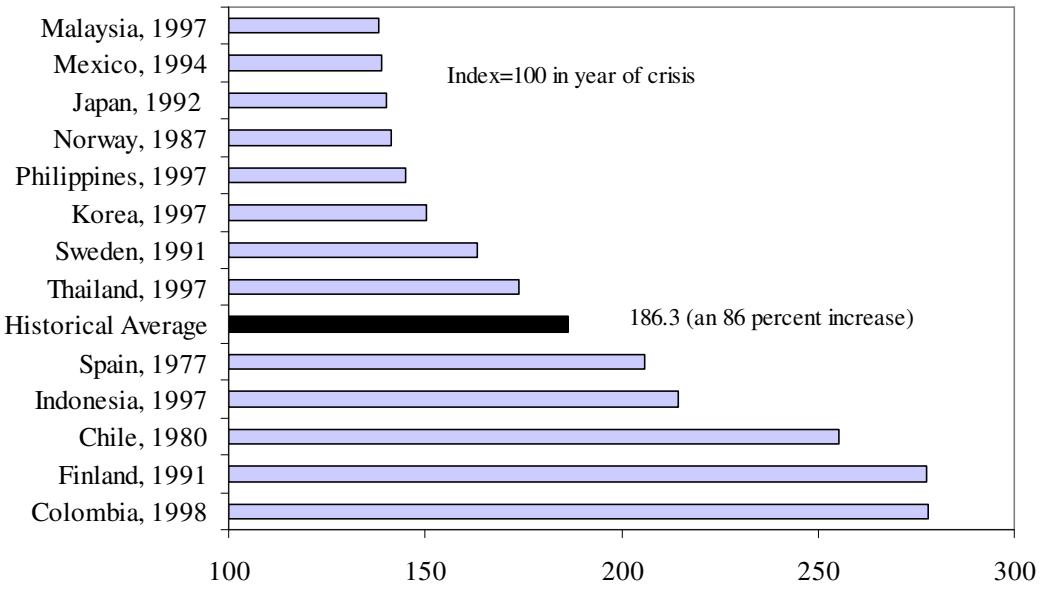
2. Public debt

Whenever there is a substantial economic downturn, high and rising unemployment, and imploding real estate prices, major fiscal consequences should be expected. Not surprisingly, the true legacy of a major financial crisis is more government debt. Figure 5 shows the rise in real government debt in the three years following a banking crisis. The deterioration in government finances is striking, with an average debt rise of over 86 percent. We look at percentage increase in debt, rather than debt-to-GDP,

because sometimes steep output drops would complicate interpretation of debt–GDP ratios. As RR note, the characteristic huge buildups in government debt are driven mainly by sharp falloffs in tax revenue.

Figure 5

Cumulative increase in real public debt in the three years following the banking crisis



Sources: Reinhart and Rogoff (2008b) and sources cited therein.
Notes: Each banking crisis episode is identified by country and the beginning year of the crisis. Only major (systemic) banking crises episodes are included, subject to data limitations. The historical average reported does not include ongoing crises episodes, which are omitted altogether, as these crises begin in 2007 or later, and debt stock comparison here is with three years after the beginning of the banking crisis.

3. Public debt: an update

We are certainly on track to the 86 percent mark. We updated this exercise, measuring real debt increases from 2007 to the latest numbers for 2009. Across the real public debt of Iceland, the U.S., the U.K., Ireland and Spain, in the first two years following the onset of the crisis, the average index is 171 percent. If Iceland is excluded,

it is still 157 percent. Thus, we are marching towards the near-doubling of the public debt.

III. Causes, Symptoms, and Amplifiers of Financial Crises

As to the causes of these great crises, we next focus on those factors that are common across time and geography; we discriminate between root causes of the crisis, its symptoms, and features such as financial regulation which serve as amplifiers of the boom-bust cycle. Pertinent to the globalization theme of this conference, the discussion begins with the link between financial liberalization (internal and external), the financial innovation and credit booms these spawn and banking crises.

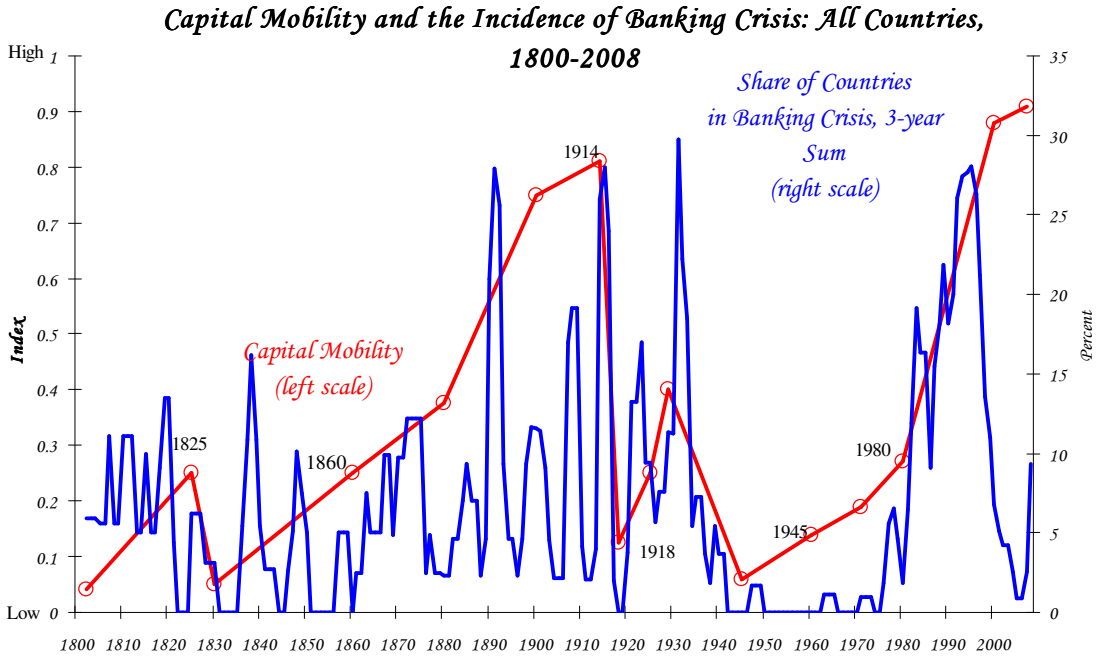
1. The roots

There is a striking correlation between freer capital mobility and the incidence of banking crises, as shown in Figure 6. ***Periods of high international capital mobility have repeatedly produced international banking crises, not only famously as they did in the 1990s, but historically.*** The figure plots a three-year moving average of the share of all countries experiencing banking crises on the right scale. On the left scale, we graph the index of capital mobility, due to Obstfeld and Taylor (2004), updated and back cast using their same design principle, to cover our full sample period. While the Obstfeld–Taylor index may have its limitations, we feel it nevertheless provides a concise summary of complicated forces by emphasizing de facto capital mobility based on actual flows.

For the post-1970 period, Kaminsky and Reinhart (1999) present formal evidence on the links of crises with financial liberalization. In 18 of the 26 banking crises they study, the financial sector had been liberalized within the preceding five years, usually less. In the 1980s and 1990s most liberalization episodes were associated with financial

crises of varying severity. Only in a handful of countries (for instance, Canada) did financial sector liberalization proceed smoothly. Specifically, the paper presents evidence that the probability of a banking crisis conditional on financial liberalization having taken place is higher than the unconditional probability of a banking crisis.

Figure 6



Sources: Bordo et al. (2001), Caprio et al. (2005), Kaminsky and Reinhart (1999), Obstfeld and Taylor (2004), and these authors.
Notes: This sample includes **all** countries (even those not in our core sample of 66). The full listing of banking crises dates are shown in Appendix II**.** On the left scale, we updated our favorite index of capital mobility, admittedly arbitrary, but a concise summary of complicated forces. The smooth red line shows the judgmental index of the extent of capital mobility given by Obstfeld and Taylor (2004), back cast from 1800 to 1859 using their same design principle.

2. The setting

Across countries and over the centuries, economic crises of all type follow a similar pattern. An innovation emerges. Sometimes it is a new tool of science of industry, such as the diving bell, steam engine, or the radio. Sometime it is a tool of financial engineering, such as the joint-stock company, junk bonds, or collateralized debt obligations. These usually accompany or are a direct result of financial liberalization, as

described above. Investors may be wary at first, but then they see that extraordinary returns appear available on these new instruments and they rush in. Financial intermediaries—banks and investment companies—stretch their balance sheets so as not to be left out. The upward surge in asset prices continues, and that generation of financial market participants concludes that rules have been rewritten: Risk has been tamed, and leverage is always rewarded. All too often, policy makers assert that the asset-price boom is a vote of confidence on their regime—that **"this time is different"**. Only seldom, to my knowledge, do they protest that perhaps the world has not changed and that the old rules of valuation still apply.

But the old rules *do* apply. The asset price rise peters out, sometimes from exhaustion on its own or sometimes because of a real shock to the economy. This exposes the weaknesses of the balance sheets of those who justified high leverage by the expectation of outsized capital gains. Many financial firms admit losses, and some ultimately fail. All those financial firms hunker down, constricting credit availability in an effort to slim their balance sheets. With wealth lower and credit harder to get, economic activity typically contracts. Only after the losses are flushed out of the financial system and often with the encouragement of lagging monetary and fiscal ease does the economy recover.

3. The symptoms

The recurring historical pattern described above is associated with some well-defined symptoms. I will focus here on a few of the symptoms or quantitative parallels (those listed in Table 1) that have been present during the current crisis in several countries and that we have seen systematically in numerous earlier crises in advanced and

emerging market economies alike.[4] Specifically, large capital inflows, sharp housing and equity price run-ups lead the "leading indicator" group. So have been surges in private domestic and external debts. These symptoms are quantifiable, unlike the more nebulous amplifiers that are discussed in the remainder of this section.

Table 1. Quantitative antecedents of financial crises:
The "lead" of the leading indicators

Large capital inflows
Sharp run-ups in equity prices
Sharp run-ups in housing prices
Inverted V-shaped growth trajectory
Marked rise in indebtedness

If we were to quantify periods of capital flow bonanzas—periods where ***capital inflows*** are unusually large—who comes up on the radar screen prior to the 2007-2009 crisis? As Reinhart and Reinhart (2008) document, in addition to the U.S. and the U.K., the other names that are listed there—Spain, Italy, Iceland, Ireland—are all countries that have had a period where the large capital inflows ended badly. Capital inflows facilitate domestic lending, fuel asset prices, and in most instances increase the indebtedness of the private sector, the public sector (if the government behaves procyclically), or both.

[4] These and other economic and financial indicators are analyzed in detail in Kaminsky and Reinhart (1999).

Table 2 Capital Inflows Typically Surge Ahead of Financial Crisis

Countries with recent notable capital inflows	2006	2007	2008
Bulgaria	√	√	√
Iceland	√	√	√
Italy	√	√	√
Jamaica	√	√	√
Latvia	√	√	√
New Zealand	√	√	√
Pakistan	√	√	√
Romania	√	√	√
Slovenia	√	√	√
South Africa	√	√	√
Spain	√	√	√
Turkey	√	√	√
United Kingdom	√	√	√
United States	√	√	√

Source: Reinhart and Reinhart (2008).
Notes: For the full list of recent bonanza episodes see the paper.

There is a sense that the U.S. ***housing price bubble*** during 2000-2006 (primarily) is both unique and unprecedented. The magnitude of the bubble is certainly unprecedented to the United States—at least during the past century for which we have comparable data. However, in a broader global context, the sub-prime bubble is neither unique to the U.S. nor it magnitudes out of line with other real estate bubbles that have also ended equally lamentably in financial crises.

Figure 7 compares the run-up in housing prices. Period *T* represents the year of the onset of the financial crisis. By that convention, period *T-4* is four years prior to the crisis, and the graph in each case continues to *T+3*, except of course in the case of the U.S. 2007 crisis, which remains in the hands of the fates.[5] The chart confirms the case

[5] For the United States, house prices are measured by the Case-Shiller index, described and provided in Robert Shiller (2005).

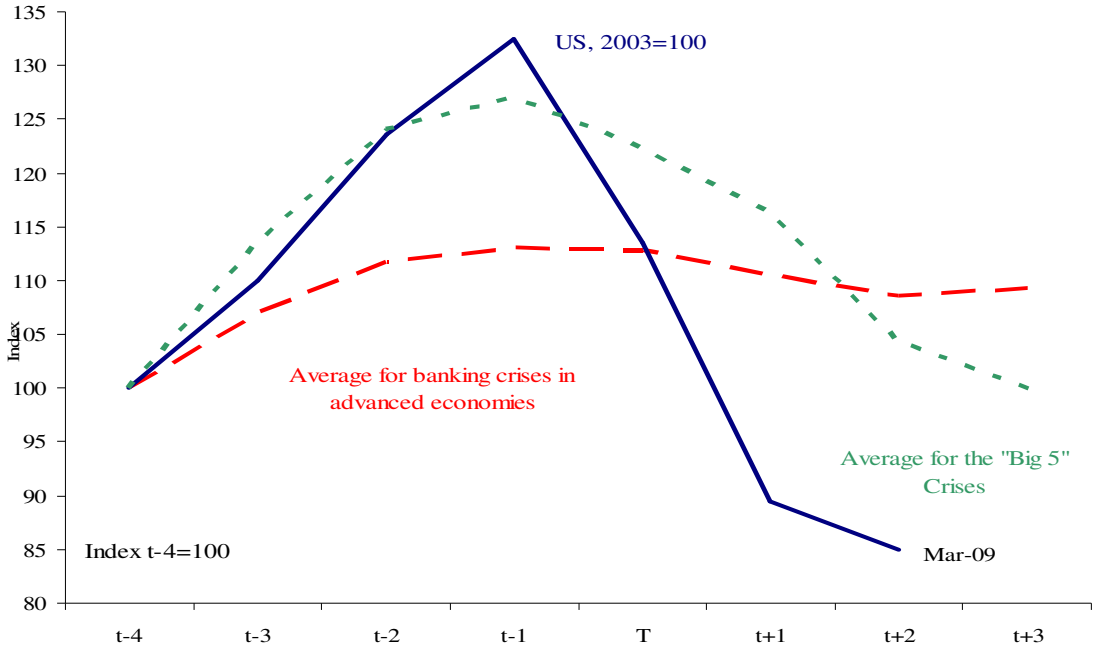
study literature, showing the significant run-up in housing prices prior to a financial crisis. Notably, the run-up in housing prices in the United States exceeds that of the "Big Five" crises (Spain, 1977, Norway, 1987, Finland, 1991, Sweden 1991, and Japan 1992).

The boom in real housing prices (or real estate, and other asset prices, more broadly) is typically fueled by ample domestic credit availability, large capital inflows, and an easy liquidity environment. Coupling the ample liquidity environment with the presumption that *this time is different* and that the old rules of valuation do not apply, then you have the makings or the ingredients for a crisis.

As to ***growth*** (inverted V-shaped pattern)–growth does very well ahead of the crisis when credit is ample and wealth effects are positive (as asset prices climb) and falls subsequently. For further evidence the reader is referred to RR.

I cannot stress enough the importance of the last entry in Table 1, ***a marked rise in indebtedness.*** Rising indebtedness can be domestic, external or both. In can be private, public or both. Any combination of these forms of rising indebtedness has been a hallmark of the pre-crisis period as far back as our data can take us. Perhaps Iceland illustrates this point in its most extreme form, as external debts rise from about 90 percent of GDP in 2000 to well over 900 percent of GDP in 2009. It is worth noting that stating that there are capital inflows is usually a different of observing that a country is borrowing from the rest of the world.

Figure 7. Real Housing Prices and Banking Crisis



Source: Reinhart and Rogoff (2009).

4. The "amplifiers"

The list (shown on Table 3) of what I have dubbed the "usual suspects", despite its breadth, is not meant to be exhaustive. It is a list that has withstood the test of time, as several of these amplifiers come up on a recurring and it is those are not unique to the United States subprime crisis. Countless case studies of banking crises, across countries and time (see references in RR) list these factors on a recurring basis--often blamed as underlying causes of the crises. However, these factors exacerbate both the boom and bust phases of the crisis cycle. For example, the stylized evidence presented in Caprio and Klingebiel (1996) suggests that inadequate regulation and lack of supervision at the time of the liberalization may play a key role in explaining why deregulation and banking crises are so closely entwined. But it is difficult to explain a cycle with a constant. Supervision may have always been lacking and the regulations ill defined. Such deficiencies may have limited consequences when credit conditions are tight (or in the case of emerging markets when access to international capital markets is not possible). If, in contrast, financial liberalization (domestic an external) creates lending possibilities that did not exist before, then inadequate supervision can make a bad lending scenario worse. Outright fraud, (often through connected lending) which crops up as another hardy perennial in studies of the run-up to crises works the same way.

The procyclicality of credit ratings (both at the sovereign and corporate levels, see Reinhart, 2002) also acts to amplify the cycle of lending and subsequent default and crash. Overvalued currencies are a magnet for capital inflows while procyclical fiscal policies add to the surge in borrowing during the boom phase of the cycle.

Far from being mutually exclusive many, if not most of the items in this list are present simultaneously in the most severe financial crises through out history.

Table 3. Amplifliers of boom-bust cycles: The usual suspects

Procyclical macroeconomic policies
Hidden debts (implicit guarantees)
Overvalued currencies
Poor regulation
Even worse supervision
Outright fraud
Myopic credit rating agencies

5. A digression on the sequencing of crises

Just as financial crises have common macroeconomic antecedents in asset prices, economic activity, external indicators and so on, ***so common patterns appear in the sequencing (temporal order) in which crises unfold.*** Obviously not all crises escalate to the extreme outcome of a sovereign default. Yet, advanced economies have not been exempt from their share of currency crashes, bouts of inflation, severe banking crises, and, in an earlier era, even sovereign default. The point of this short digression is to note that the long debt cycle we have discussed does not necessarily end with a banking crisis—more bad news usually follows—a stylized fact that should be kept in mind when trying to make sense of the current conjuncture.

Investigating what came first, banking or currency crises, was a central theme of Kaminsky and Reinhart's (1999) "twin crises" work; they also concluded that financial liberalization often preceded banking crises; indeed, it helped predict them. Demirgüç-Kunt and Detragiache (1998), who employed a different approach and a larger sample, arrived at the same conclusion. Reinhart (2002) examined the currency crash–external default link. Our work here has investigated the connections between domestic and

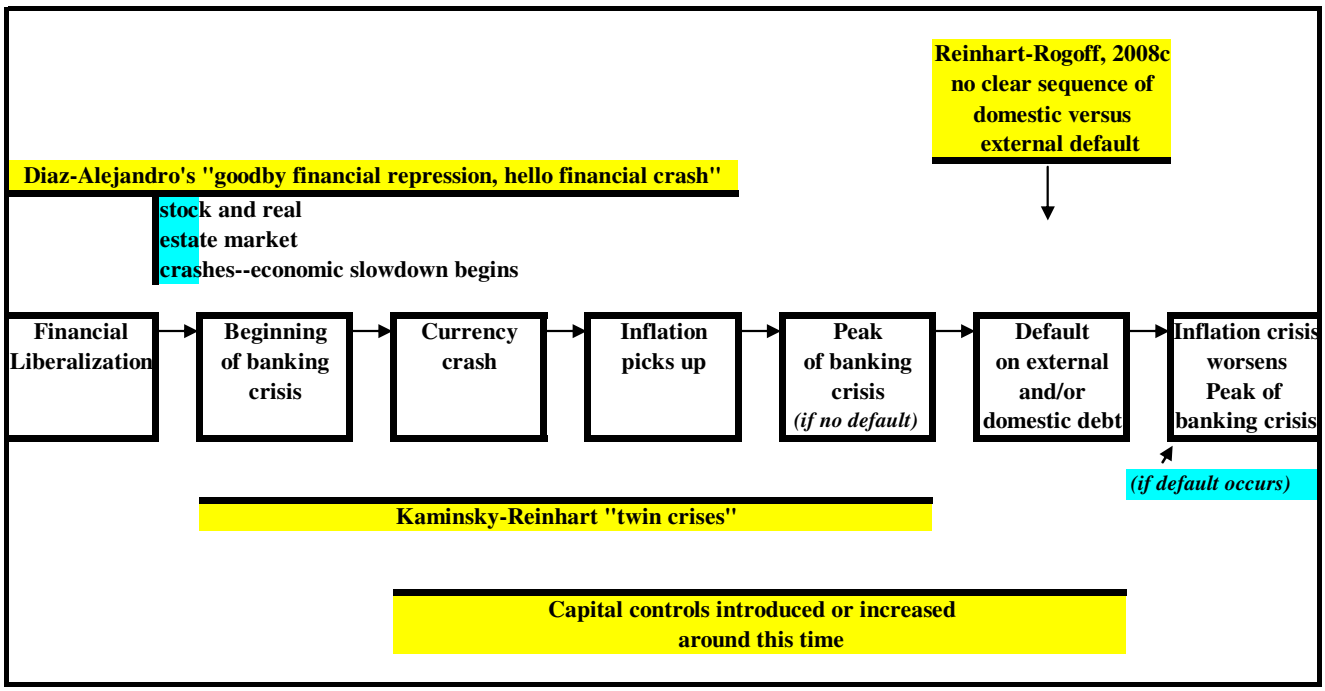
external debt crises, inflation crises and default (domestic or external), and banking crises and external default.[6] Figure 7 maps out a "prototypical" sequence of events yielded by this literature.

As Diaz-Alejandro (1985) narrates in his classic paper about the Chilean experience of the late 1970s and early 1980s, "*Goodbye Financial Repression, Hello Financial Crash*," financial liberalization simultaneously facilitates banks' access to external credit and more risky lending practices at home. After a while, following a boom in lending and asset prices, weaknesses in bank balance sheets become manifest and problems in the banking sector begin.[7] Often these problems are more advanced in the shakier institutions (such as finance companies) than in the major banks.

The next stage in the crisis unfolds when the central bank begins to provide support for these institutions by extending credit to them. If the exchange rate is heavily managed (it does not need to be explicitly pegged), a policy inconsistency arises between supporting the exchange rate and acting as lender of last resort to troubled institutions. The very numerous experiences in these studies suggest that (more often than not) the exchange rate objective is subjugated to the lender of last resort role of the central bank. Even if central bank lending to the troubled financial industry is limited in scope, the central bank may be more reluctant to engage in an "interest rate defense" policy to defend the currency than would be the case if the financial sector were sound. This brings the sequence illustrated in Figure 7 to the box labeled currency crash.

FIGURE 7 **The sequencing of crises: A prototype**

[6] Reinhart and Rogoff (2004) also examined the relationship between currency crashes and inflation as well as the currency crash–capital control (specifically, dual or multiple exchange rates) timing.
[7] In contrast to other studies of banking crises, Kaminsky and Reinhart (1999) provide two dates for each banking crisis episode—the beginning of a banking crisis and the later peak.



Sources: Authors' introspection based on empirical evidence from: Demirgüç-Kunt and Detragiache (1998), Diaz-Alejandro (1985), James (2002), Kaminsky and Reinhart (1999), Kindelberger (1985), Reinhart (2002), Reinhart and Rogoff (2004 and 2008c), among others.

The depreciation or devaluation, as the case may be, complicates the situation in (at least) three dimensions: (a) it exacerbates the problem of the banks who have borrowed in a foreign currency, worsening currency mismatches; (b) inflation usually worsens (The extent to which the currency crisis translates into higher inflation is highly uneven across countries, as countries with a history of very high and chronic inflation usually have a much higher and faster pass-through from exchange rates to prices); and (c) if the government has foreign currency–denominated debt, the currency depreciation increases the odds of an external and domestic default.

At this stage, the banking crisis either peaks following the currency crash, if there is no sovereign credit crisis, or keeps getting worse as the crisis mounts and the economy marches toward a sovereign default (the next box in Figure 7).

This is a very common pattern in the sequencing of crises. Notice the first entry there has financial liberalization. And financial liberalization is really not just liberalization proper, but big innovation, creations of new market. In the current conjuncture, the creation or the growth of securitization of mortgages is a big factor. Notice, perhaps more grimly, that the last entry is a debt crisis, which brings me to my concluding remarks.

IV. Concluding reflections on complacency and debt

Many (if not most) of the advanced economies of the world are faced with a worrisome public debt profile over the medium term. The debt profile is even more alarming if contingent liabilities and the graying of the population is factored in the analysis.

Many emerging markets—singularly in Eastern Europe and the former Soviet Union—also have external debt levels (public plus private) that have been often associated historically with debt servicing difficulties and outright default.

Outside of Emerging Europe, the view is that emerging markets have weathered the storm. Indeed, a very important factor in this capacity to cope with such a massive adverse shock during 2007-2009 is importantly linked to the fact that many important emerging markets, most notably in Asia and Latin America had reduced their debt burdens (particularly external debts) during the boom of 2000-2006 (where the private sector in advanced economies were rapidly becoming highly leveraged). Governments have been well placed to finance the recession-induced deficits through domestic debt. Indeed, many generally knowledgeable observers have argued that the recent shift by

many emerging market governments from external to domestic bond issues is revolutionary and unprecedented.[8] Nothing could be further from the truth; this is "dangerous complacency." As RR highlight, domestic debts accounted for more than half of public debts in emerging markets since 1900. There are also plenty of examples of defaults on domestic debt. Domestic debt, no doubt has many advantages over external debt—but is not the panacea that many believe it is. Advanced economies are in the process of painfully illustrating this point at the time of this writing. Domestic debt also has to be repaid.

I will conclude with this uplifting note. Public debt levels have been soaring in many countries owing primarily to a weak economy; private debt levels are not coming down quickly enough for virtually for the same reason. Without being melodramatic, the odds for a much higher incidence of default and (or) a higher incidence of inflation, should not be underestimated.

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[8] See the IMF Global Financial Stability Report, April 2007; many private investment-bank reports also trumpet the rise of domestic debt as a harbinger of stability.

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